

ENGINEERS AUSTRALIA
Western Australia Division



**ENGINEERS
AUSTRALIA**

NOMINATION OF

***FREMANTLE FORTRESS- LEIGHTON BATTERY
WW2 COASTAL DEFENCE FACILITIES***

**FOR AN
ENGINEERING HERITAGE NATIONAL MARKER**



**PREPARED BY ENGINEERING HERITAGE WESTERN AUSTRALIA
ENGINEERS AUSTRALIA
WESTERN AUSTRALIA DIVISION**

June 2014

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Photographs: Except where indicated, all photographs in this document are by courtesy of the *Royal Australian Artillery Historical Society of Western Australia (RAAHSWA)*.

Cover page photo: A 6-inch gun emplacement.

1. INTRODUCTION

This nomination should be read in conjunction with the successful nomination submitted in 2010 for engineering heritage recognition of Fremantle Fortress – Rottnest Island WW2 Coastal Defence Facilities. An Engineering Heritage National Landmark award was made on that occasion.

The construction of the extensive Rottnest Island coastal defence facilities commenced in 1935 and the 9.2 inch guns at Oliver Hill and the 6 inch guns at Bickley Point became operational by the end of 1938.

The Leighton Battery facility at Buckland Hill, Mosman Park, a few kms north of Fremantle, was the most extensive of the mainland coastal defence facilities completed during the early 1940s. Two 6 inch coastal artillery guns at Leighton became operational in February 1943. The battery took over from the Arthur Head (Fremantle) battery the role of an **Examination Battery**, keeping a lookout for ships arriving in Gage Roads. A battery of four 3.7 inch anti-aircraft guns was also installed at Buckland Hill in late 1941. In 1944 the threat of enemy air attack in lieu of naval attack prompted the decision to install three 5.25 inch dual purpose coastal artillery/anti-aircraft guns and they became operational at Leighton in 1947.

If the nomination is successful it is proposed to design, manufacture and install at the battery site an interpretation panel describing the complete Fremantle Fortress World War 2 Coastal Defence Facilities. Approval has been given for this initiative by the Managing Owner, The Town of Mosman Park, and the Royal Australian Artillery Historical Society WA (Inc). The latter organisation provides volunteer guides for public tours of the Leighton Battery military museum.

2. STATEMENT OF SIGNIFICANCE

The Leighton Battery, the conserved remains of a mostly underground World War 2 artillery defence installation, comprising a complex of underground tunnels, various engine, magazine and rest rooms, an observation post, a semi-buried command post, two 6 inch gun emplacements, two 5.25 inch gun emplacements (one of which remains buried), a radar hut, access roads and limestone retaining walls, and the surrounding open space, has cultural heritage significance for the following reasons :

The battery was an important part of Fremantle Fortress, the coastal defence network established prior to and during World War 2 to protect the Port of Fremantle from enemy sea and air attack.

The extensive underground defence facility tunnel network is an excellent example of technical achievement.

The site is a remnant of a much larger military complex, which occupied most of Buckland Hill after 1941.

It is the site of the only 5.25 inch dual use coastal artillery/anti-aircraft battery of the eight which were planned to protect Australian ports during World War 2, which actually became operational.

The facilities, and the high level of military interpretation on display, are of considerable significance to men and women who served in Australian Army artillery units in World War 2 and in succeeding wars, as well of interest to the general public.

LEVEL OF SIGNIFICANCE: NATIONAL

3. LOCATION

The location of Buckland Hill in Mosman Park is shown in Figure 1, and a satellite photo of the Leighton Battery site in Figure 2.

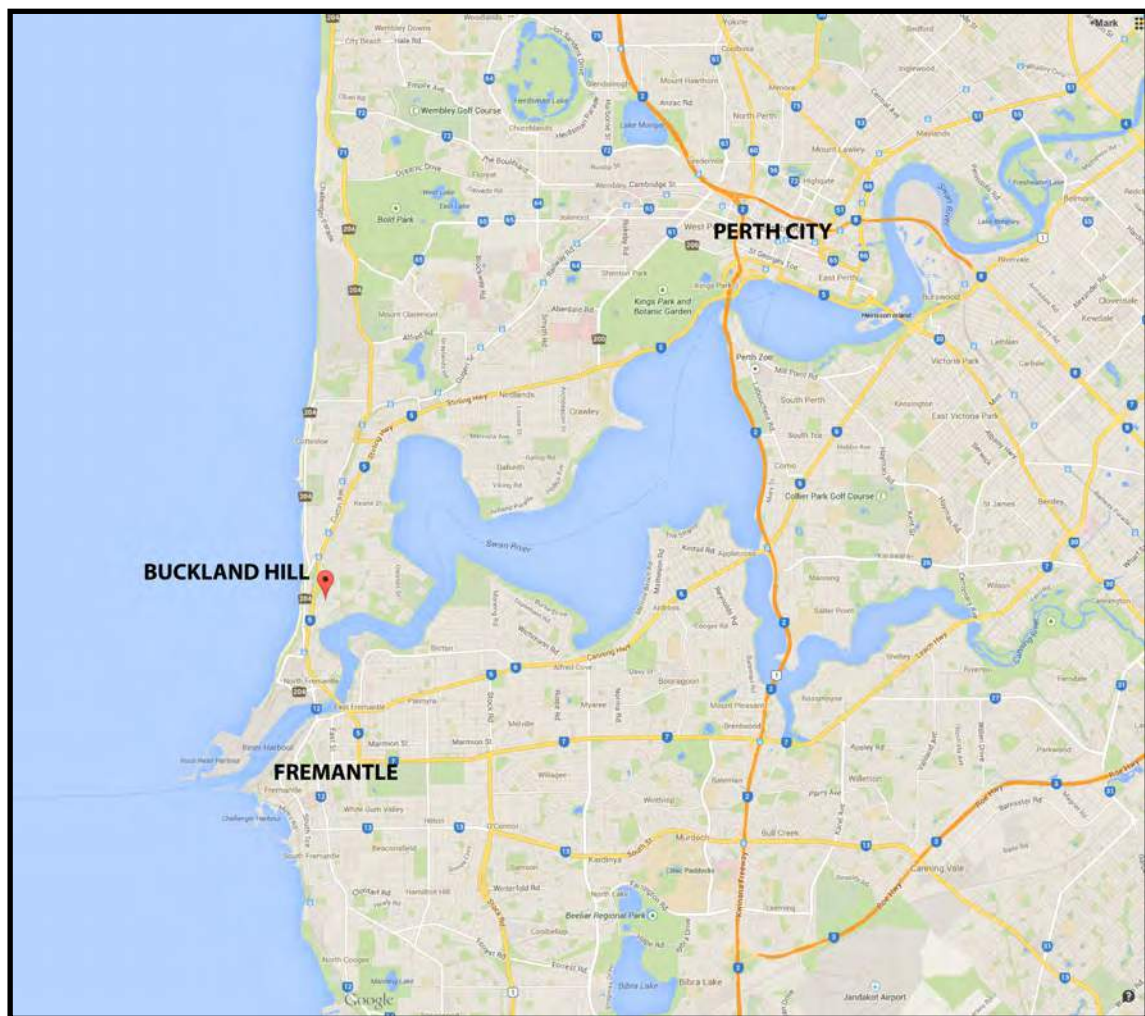


Figure 1. Map of Perth and Fremantle, highlighting the location of Buckland Hill (Courtesy Google Maps)



Figure 2. Satellite photo of the Buckland Hill site (Courtesy Google Maps)

4. HERITAGE RECOGNITION NOMINATION FORM

The Administrator
Engineering Heritage Australia
Engineers Australia
Engineering House
11 National Circuit
BARTON ACT 2600

Name of Work : Fremantle Fortress – Leighton Battery WW2 Coastal Defence Facilities

The above mentioned work is nominated to be awarded a

Engineering Heritage National Landmark

Location, including address and map grid reference :

This nomination refers to the defence facilities at Leighton (Buckland Hill), Mosman Park, Western Australia, being part of a large coastal defence system built before, during and after World War 2. Specifically the nomination focuses on the 6 inch and 5.25 inch gun batteries installed at Leighton.

Coordinates 32° 1' 4.75" S, 115° 45' 22.05" E

Owner : Town of Mosman Park, PO Box 3, Mosman Park WA 6912, with whom management of the site was vested by the Government of Western Australia.

The Owner has been advised of this nomination and a letter of agreement is included.

Access to site : The Leighton Battery can be accessed off Boundary Road, Mosman Park, just off Stirling Highway. Guided tours of the tunnels and above ground facilities are conducted half hourly every Sunday from 10 am to 3 pm.

Nominating Body : Engineering Heritage Western Australia, Engineers Australia, Western Australia Division.



Professor Mark Bush, Chair EHWA
Date: 25 May, 2014

5. OWNER'S LETTER OF AGREEMENT

"Between River and Sea"



TOWN OF
MOSMAN PARK

Our Ref: 3880

KP/HC

Enquiries to: Haylie Clark

20 May 2014

Dr David McCarthy
Administrator
Engineering Heritage Australia
Engineers Australia
11 National Circuit
Barton ACT 2600

Dear Dr McCarthy,

LEIGHTON BATTERY - NOMINATION FOR HERITAGE RECOGNITION - OWNER'S LETTER OF AGREEMENT

This letter accompanies the nomination by Engineering Heritage WA to Engineering Heritage Australia of the Leighton Battery for a heritage recognition award.

The Town of Mosman Park is pleased to support this initiative of Engineering Heritage WA. If the nomination is successful, the Town is prepared to consider funding towards the manufacture of an interpretation panel and a commemoration ceremony at the Leighton site in the fourth quarter of 2014. We would also be prepared to assist Engineering Heritage WA and The Royal Australian Artillery Society Western Australia (Inc) in organising the ceremony.

Should you have any further queries please contact the Town's Grants Officer Haylie Clark on 9384 1633.

Yours faithfully,

KEVIN POYNTON
CHIEF EXECUTIVE OFFICER

Memorial Park, Bay View Terrace, Mosman Park, WA 6012 PO Box 3, Mosman Park, WA 6912
T: (08) 9384 1633 F: (08) 9384 3694 E: admin@mosmanpark.wa.gov.au W: www.mosmanpark.wa.gov.au

6. HISTORICAL SUMMARY

As detailed in the successful nomination for engineering heritage recognition of Fremantle Fortress – Rottnest Island WW2 Coastal Defence Facilities in 2010, confidential discussions between the Joint Overseas and Home Defence Sub-Committee of the Committee of Imperial Defence of Great Britain and Commonwealth of Australia Government resulted in the overhauling of defence plans for the Commonwealth. By 1933 a Three Year Defence Program was underway. The need to defend vulnerable ports on the Australian coastline became a priority and Fremantle was identified as a key point on the Western coastline.

The original plan for the defence of Fremantle was to place 9.2 inch guns on an elevated site at Buckland Hill in Mosman Park, but it was realised that this strategy would not have prevented long range bombardment of the port by cruisers equipped with 8 inch guns. It was then decided to locate the 9.2 inch guns at Oliver Hill on Rottnest Island which would allow engagement of hostile ships before they were in range to bombard the port. It was also decided to install 6 inch guns at Rottnest Island, Arthur Head (Fremantle) and Fort Forrest (North Fremantle).

A subsequent decision was taken in mid 1935 to place the Fort Forrest battery at Swanbourne (north of Cottesloe). The reason for overlooking the superior Buckland Hill site was the proximity of the Perth to Fremantle railway and main road, plus the concern that the concussion of the guns would seriously interrupt cable communications and damage valuable instruments at the nearby Cottesloe cable station.

When war broke out on 3 September 1939 the 9 inch and 6 inch gun batteries at Rottnest Island were operational, as were the 6 inch Arthur Head and Swanbourne batteries.

In early 1942 consideration was given to re-locating the Arthur Head battery to Buckland Hill. A probable reason was concerns by the Navy related to the increased level of shipping in Fremantle Harbour **over** which the Arthur Head battery would have to fire to defend the examination anchorage and Gage Roads. In June 1942 the decision was taken to re-locate the Arthur Head battery to Buckland Hill (Leighton).



Figure 3. View looking east towards Buckland Hill c. 1942

It is not clear exactly when construction commenced at the Buckland Hill site but in January/February 1943 the 6 inch guns were moved from Arthur Head. Proof firing of the Leighton battery occurred on 8 February 1943. The Leighton Battery was known as an **Examination Battery**. Its purpose was to keep a lookout for ships and, when in view, to advise HQ if the ships were giving the correct identification signals. If a ship did not signal properly, the battery sighted the guns ready to fire, if instructed, a warning shot across the bow of the ship. The 6 inch guns at Leighton ceased operation in March 1945 and were re-located to the Princess Royal battery at Albany later in the same year.



Figure 4. Surface activities at No.2 Gun Emplacement at 6 inch Battery Site 1942

Prior to the installation of the 6 inch guns a 3.7 inch anti-aircraft battery was deployed in the Buckland Hill area and became operational in late 1941.

Additional batteries were subsequently installed at Garden Island and Point Peron (south of Fremantle) to complete Fremantle Fortress.



Figure 5. 3.7 inch A/A Gun and crew

5.25 inch Batteries Planned for Fremantle Fortress

In the second half of 1942 consideration was given to the installation of 5.25 inch dual role coastal artillery/anti-aircraft batteries in Australia.

In early 1944 it was decided to install 5.25 inch batteries at Leighton, South Fremantle and Point Peron. Work commenced at the Leighton site in May 1944, but due to financial restraints it was not completed until the second half of 1947 and the battery was proofed in November of that year. The installation of the South Fremantle battery was commenced but not completed and it was subsequently decided not to proceed with the Point Peron battery.

Although 5.25 inch dual purpose guns were planned for the defence of every major port in Australia, the Leighton Battery was the only one which actually became operational.



Figure 6. 5.25 inch Coast/AA Gun firing in the Anti-Aircraft mode (above) and coastal defence mode (below)

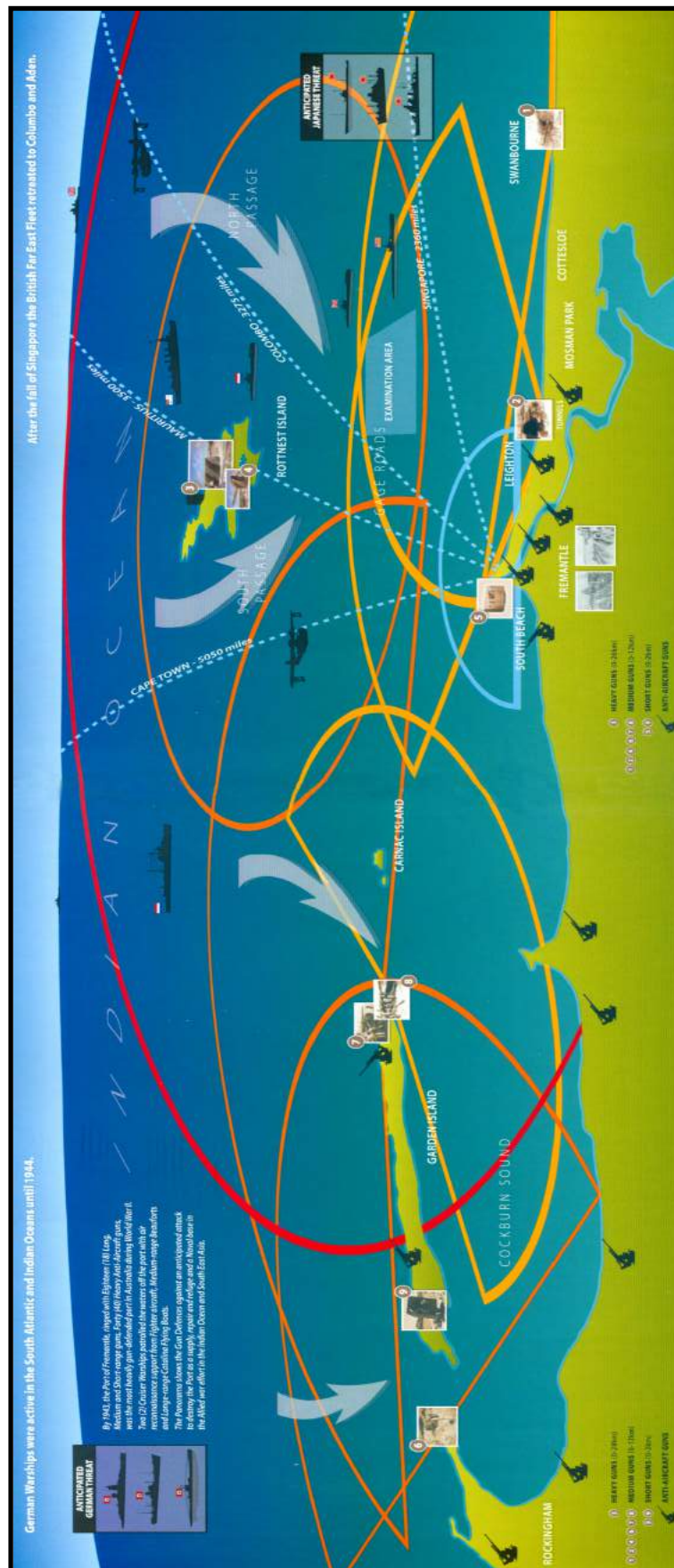


Figure 7. Coverage afforded by the Fremantle Fortress batteries by 1943.

Post World War 2 Development

After WW2 the battery was used for regular Army training, and from 1952 by the Citizens' Military Force which was a significant part of the National Service Scheme. The Army continued to use the facilities at the site until 1979 when the tunnels were closed by bulldozing the entrances.

In 1984 the Commonwealth relinquished its land at Buckland Hill and most of it was sold for re-development. Some land, including the area allocated to the battery, was set aside for public open space.

The Royal Australian Artillery Historical Society of Western Australia (Inc) – RAAHSWA was subsequently granted permissive occupancy of the Battery area and was authorised to develop a military museum at the site.

The developer of Buckland Hill Estate, the residential area south of the battery, worked with the members of the RAAHSWA to conserve the battery tunnels and gun emplacements.

During the late 1980s and the 1990s restoration of the site and conservation work of the battery facilities was undertaken, financed by grants from Commonwealth and State agencies.

The restored **Leighton Battery** was officially opened, under that name, on 29 November, 1997, by His Excellency Major General Michael Jeffrey, AO MC, Governor of Western Australia.

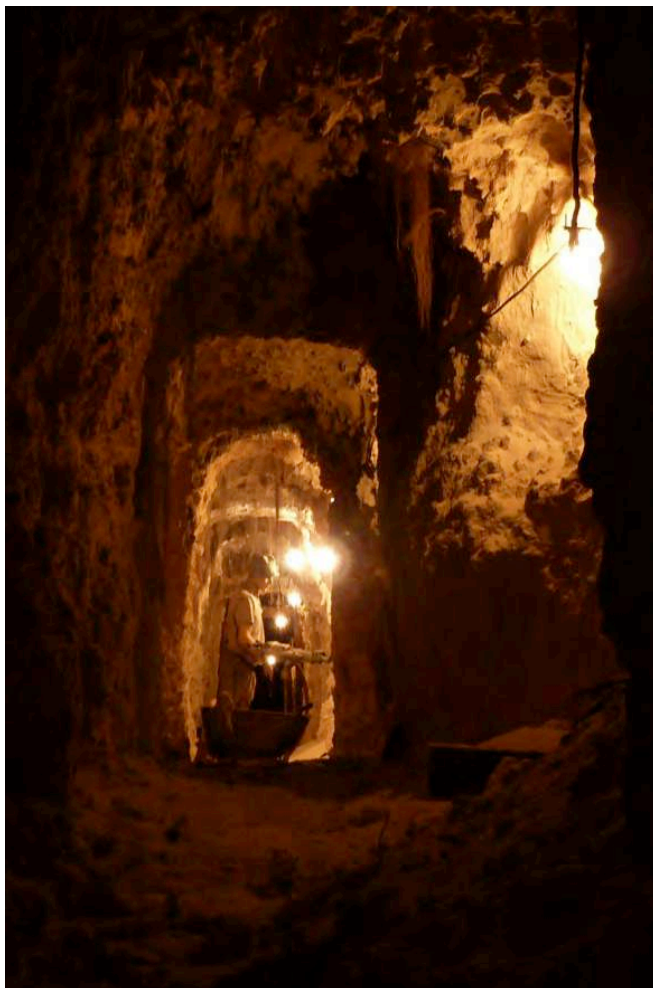


Figure 8. Reconstruction of original tunnel excavation

7. BASIC DATA

Item Name	Fremantle Fortress Leighton WW2 Coastal Defence Facilities
Location	Buckland Hill Coordinates : 32° 1' 4.75"S, 115° 45' 22.05" E
Address	Corner Stirling Highway and Boundary Road, Mosman Park
Suburb	Mosman Park
State	Western Australia
Local Govt. Area	Town of Mosman Park
Owner	Town of Mosman Park with whom management of the site was vested by the Government of Western Australia Department of Regional Development
Current Use	The Royal Australian Artillery Historical Society of Western Australia (Inc) has developed and manages the site as a military heritage museum and provides volunteers to conduct guided tours of the facilities every Sunday.
Designer	Commonwealth Department of the Interior
Constructor	7 th Australian Troop of the Royal Australian Engineers and the Royal Australian Artillery, PWD WA (5.25 inch coastal battery)
Year Started	3.7 inch anti- aircraft battery 1941 6 inch gun battery 1942 5.25 inch coastal/anti-aircraft battery 1944
Year Completed	3.7 inch anti-aircraft battery 1941 6 inch gun battery 1943 5.25 inch coastal/anti-aircraft battery 1947
Modifications and Dates	See section "Physical Description and Current Condition"
Historical Notes	See section "Historical Summary"
Heritage Listings	The Australian Heritage Commission placed the item on the Register of the National Estate on 22 June 1993 National Trust Classification 13 May 1996 Permanent Entry on Western Australian Register of Heritage Places 27 August 1999

8. PHYSICAL DESCRIPTION AND CURRENT CONDITION

The Leighton Battery is situated in a 7.4 ha area of 'A' Class Reserve land on the western slope of Buckland Hill. Its elevated position, with a view over the Indian Ocean to Garden and Rottnest Islands, was a significant factor in its original selection as a battery site.

Most of the historic built structures are underground. Structures visible on the surface include the concrete entrance and upper part of the command post, the two concrete and brick entrances to the tunnels, the tops of three of the tunnel's shafts, the observation post window and concrete roof, a brick structure known as the radar hut and three gun emplacements.



Figure 9. Aerial photo of the site today (Courtesy Google Maps)

Two tunnel entrances lead to a 300 metre long underground complex of tunnels and rooms, up to 10 metres deep, and extending approximately 100 metres north – south, and 60 metres west, excavated in solid limestone. The underground complex comprises ammunition magazines, rooms for technical equipment, workshops, plotting rooms, a first aid post, rest areas and communications and observation posts. The tunnel entrances are constructed of concrete and brick and are generally an accurate reconstruction of the original entrances, which were bulldozed in 1979. Entrances are fitted with steel doors. The south entrance

accesses a small foyer in which the controls for the modern electrical and ventilation equipment for the tunnels is installed. Rough, in-situ formed, concrete steps lead down to the tunnel complex. Here, the delineation between the original and reconstructed masonry and timber elements is clearly evident.

Most of the tunnels and rooms are on an essentially common level, but the eastern section, including the observation post and associated rest rooms, are at a higher level. In general the tunnels and rooms have poured concrete floors, brick lining walls and jarrah plank ceilings and support posts. Shafts for ammunition, ventilation and escape are either brick or timber lined. Some are now sealed at the top while open shafts have modern 'whirly-bird' vents. The construction materials and methods appear domestic in nature, although the workmanship is skilled.

Both 6 inch gun emplacements have been partially reconstructed, the northern one having survived more intact. Of the three 5.25 inch gun emplacements, only the northern one has been conserved, the centre one remains buried and the location of the demolished southern one is no longer within the site boundary. The conserved gun emplacement is circular, set into the ground and is constructed of concrete with the steel holding down bolts still set into the mounting plinth.

The radar hut constructed in 1961 is a small brick building with a steel door and no windows. Steel steps access the flat concrete roof of the hut, which is paved in irregular decorative stone with a mosaic gun motif.

The site has a 6 inch gun barrel mounted on a concrete pedestal where the original north 6 inch gun emplacement was located. A 3.7 inch anti-aircraft gun is positioned south of the radar hut. Neither item is original.



Figure 10. Reconstruction of Observation and Command Post



Figure 11. Interpretation display in Propellant Magazine No.2 6 inch gun

9. ASSESSMENT OF SIGNIFICANCE

Creative or Technical Achievement

The original excavation work into solid limestone to form a complex of underground tunnels and rooms was a considerable technical achievement. Fortunately the Battery Commander was a mining engineer who used his experience to help make the project a success.

Social Significance

Leighton Battery is highly valued by members of The Royal Australian Artillery Historical Society of WA (Inc) who have greatly contributed to the successful conservation and interpretation of the site. Their establishment of a military museum to provide access for the general community to allow appreciation of the historic and military aspects of the site has considerable social value.

Rarity

Leighton Battery was the only one of the eight 5.25 inch dual coastal/anti-aircraft batteries planned for the defence of Australian ports to become operational.

Representativeness

Leighton Battery demonstrates some of the characteristics of artillery sites, design and technical features as well as aspects of military customs and conditions for personnel.

Integrity

The integrity of the Leighton Battery is high. Much of the original structure is intact and the World War 2 use of the site has been very well interpreted by the RAAHSWA. This organization is committed to the preservation of the site and the continuing development of the interpretation.

10. EMINENT PERSONS ASSOCIATED WITH THE PROJECT

Eminent Australian persons who were associated with the planning and execution of the Fremantle Fortress WW2 Coastal Defence Facilities were Mr Joseph Lyons (Prime Minister of Australia 1932–1939; Lieutenant– General Sir J.J. Talbot–Hobbs (WW1 artillery expert); Colonel V.A.H. Sturdee (Australian Director of Military Operations and intelligence 1934–1939; and Captain B. F. Hussey RAE (Engineer–in–Charge on Rottnest Island 1935–1940).

Joseph Lyons

Joseph A. Lyons was born in Tasmania in 1879. On leaving school he trained as a teacher and also became an early member of the Australian Labor Party in his home state. In 1903 he was elected to the Tasmanian House of Assembly and soon demonstrated his ability by becoming Finance Minister in 1914, then Minister for Education and Railways in 1916. He oversaw a number of significant reforms in the state education system during his tenure as Education Minister. He became Premier of Tasmania in 1923 and was re-elected in 1928. In 1929 he entered Federal Parliament and soon became Postmaster-General and Minister for Works and Railways in the Scullin Labor Government.



When the Depression hit Australia in 1930 Lyons temporarily took over the Treasury portfolio. His conservative approach to coping with the economic crisis angered many members of the Labor caucus. In 1931 Prime Minister Scullin stood him down from the Treasury bench. Soon after Lyons resigned from the Cabinet and the Labor Party, and, together with four other disaffected Labor MPs, he crossed the floor to sit on the Opposition benches. Subsequently, he became the Head of the newly formed United Australia Party (UAP), which had a landslide victory at a general election in December 1931. Lyons was sworn in as the 10th Prime Minister of Australia in January 1932. His party was re-elected to govern in 1934 and 1937.

Lyons was one of the most popular politicians to hold the office of Prime Minister. When he died of a heart attack in April 1939 there was widespread grief throughout the nation.

In 1915 Joseph Lyons married fellow teacher Enid Burnell. She was a great support to him throughout his political career, as well as being mother to their twelve children. Enid Lyons went in to politics herself in 1943, becoming the first woman to sit in the House of Representatives, and later the first woman cabinet Minister in a Menzies Liberal Government. She was made a Dame of the Order of the British Empire in 1936 and a Dame of the Order of Australia in 1980. She died in 1981.

(Photo courtesy of National Library of Australia)

Lieutenant-General Sir J.J.Talbot Hobbs



Joseph John Talbot Hobbs was a successful Perth architect who also had a distinguished military career. After migrating to Western Australia in 1887 he set up a practice as an architect. He joined the Volunteer Field Artillery before World War 1 as a gunner, but was rapidly promoted in 1897 to the rank of Major. He made a special study of gunnery, attending courses in England in 1902 and 1906 and took a Diploma in Military Science at the University of Sydney in 1909. In 1908 he was promoted to Lieutenant Colonel and had command of the Western Australian Army Brigade. In August 1914 he was chosen to command the Australian Army's 1st Division Artillery.

Lieutenant Colonel Hobbs was involved in the Gallipoli campaign in 1915 and on the Western Front from 1916 to 1918, being promoted to the rank of Major General to command the 5th Australian Division in January 1917. In November 1918 he succeeded General Sir John Monash as Commander of the Australia Corps, being promoted to the rank of Lieutenant General. For his distinguished service in the field he received a KCB in 1918 and a KCMG in 1919.

Post war Hobbs resumed his architectural practice in Perth but continued his military interests. In 1921 he was again made Commander of the 5th Division, holding this appointment until he retired from the army in 1927. In 1922 he became the military representative on the faculty of engineering at the University of Western Australia, which awarded him an honorary degree of Doctor of Law.

Hobbs took a special interest in the erection of war memorials. He designed four of the five division memorials in France and Belgium, chose the site of the Australian National Memorial at Villers Bretonneux, and designed the Western Australian War Memorial in Kings Park.

Sadly he was on his way to France in 1938 to attend the unveiling of the Villers Bretonneux Memorial in 1938 when he suffered a fatal heart attack. His body was returned to Perth for a state funeral with full military honours. In 1940 a memorial was erected to Hobbs on the Esplanade in Perth.

Understandably in 1934 the Minister for the Army and Army Chief of Staff were very pleased that Sir Talbot was able to provide his advice on the location of guns on Rottnest Island when the first reconnaissance took place in June of that year.

(Photo by Fred Leist, courtesy of Australian War Memorial)

Colonel V.A.H Sturdee

Colonel Vernon Sturdee, born in Victoria in 1890, was a regular officer of the Royal Australian Engineers who joined the Militia in 1908. He was one of the original Anzacs who landed at Gallipoli on 25 April, 1915. He subsequently served on the Western Front and became successively commander of the 5th and 8th Field companies.

In 1934, Colonel Sturdee was Director of Military Operations and Intelligence, Department of Defence. He travelled from Melbourne to Western Australia in August 1934 to carry out the second reconnaissance on Rottnest Island. He chose sites for the barracks, workshops and other establishments required for coastal defences in August 1934.

Ranked as a Colonel at the outbreak of WW2 in 1939 Sturdee was promoted to Lieutenant General in 1940 and became Chief of the General Staff. He then proceeded to conduct a doomed defence of the islands to the north of Australia against the advancing Japanese forces. In 1942 he successfully advised the Government to divert the Australian Imperial Forces returning from the Middle East from Burma to Australia. He then became head of the Australian Military Mission to Washington, DC, where he represented Australia before the Combined Chiefs of Staff. He was Commander of the Australian army in New Guinea in 1944-1945 and succeeded General Sir Thomas Blamey as Commander in Chief of the Australian Military Forces in December 1945. He became Chief of the General staff a second time in 1946, serving in that role until he retired in 1950. Sturdee was knighted in 1951. He died in May 1966 and was given a state funeral with full military honours.



(Photo by Murray Griffin, 1957, courtesy of Australian War Memorial)

Captain B.F. (Frank) Hussey RAE

Captain Hussey was born in Menzies, WA in 1907. He entered the Royal Military College, Duntroon, in February 1924, aged 16 years 10 months, the minimum age for admission. He graduated from the RMC in December 1927 (photo at right), first in his class of 14, winning the Kings Medal, and then completed a Bachelor of Engineering degree at Sydney University in 1930.

From 1934 to 1939 he was attached to the Department of the Interior and in September 1935, with the rank of Lieutenant, he was transferred to Rottnest Island to supervise the building of the railway from the jetty to Oliver Hill and preliminaries for all the works on the island. Later promoted to Captain he became Engineer-in-Charge on Rottnest for the Department of the Interior. At the end of his service on Rottnest in April 1940 he was promoted to the rank of Major and was appointed Chief Instructor at the School of Military Engineering (Fortress Wing), Georges Heights, Sydney NSW.



(Photo courtesy Royal Military College Duntroon)

11. INTERPRETATION PLAN AND BUDGET

It has been agreed with the Town of Mosman Park and The Royal Australian Artillery Society WA (Inc) to place an interpretation panel at the Leighton Battery museum site. A draft design of the panel is included with this nomination (Figure 12). Significantly, the panel will describe the complete Fremantle Fortress World War 2 Coastal Defence Facilities, with the emphasis on Rottnest Island and the Leighton battery facilities. The panel will be similar to the one erected at Kununurra recently for the Ord River Diversion Dam, ie. with the EHA 300 mm disk mounted on a strut spanning between the legs of the panel.

It should be noted that when the Fremantle Fortress Rottnest Island WW2 Coastal Defence Facilities was awarded an Engineering Heritage National Landmark in 2010, the Owner, the Rottnest Island Authority, would not permit the installation of an EHA interpretation panel on the island.

If the nomination is successful it has been agreed to hold a commemoration ceremony at the Leighton Battery site in the second half of this year. The intention is to invite, inter alia, Local Government representatives, State and Federal members of Parliament, Army, RAAHNSWA, Rottnest Island Authority and Engineers Australia representatives.

Budget

ITEM	NOTES	BUDGET
Nomination Production Costs	Volunteer effort	\$0.00
Panel Design	Quote pending	TBA
Panel/Frame Manufacture	Quote pending	TBA
Panel Delivery	Estimated	\$100.00
Panel Install Costs	To be installed by City Mosman Park	unknown
PVC Panel	(If needed)	\$200.00
Ceremony Costs	Covered by City Mosman Park and RAAHNSWA	unknown
TOTAL COST (known amounts):		\$TBA

It is anticipated that the Town of Mosman Park (owner) and the Mosman Park branch of the Returned Services League will meet the costs of the panel and frame manufacture, installation and the ceremony. The issue of invitations and registering of RSVPs will be done by the EA WA Office staff.

12. ACKNOWLEDGEMENTS

The authors wish to thank the following people for their assistance in supplying and collecting information used in preparing this nomination.

Mr Don Rae, Foundation President of The Royal Australian Artillery Historical Society WA (Inc). (RAAHSWA)

Mr Matthew Adams, member of the RAAHSWA

Mr John O'Brien, member of the RAAHSWA

13. REFERENCES

The Western Australian State Heritage Office : Documentation leading to Permanent Entry on the WA State Register of Heritage Places 27 August 1999

Buckland Hill as a Defence Site – Beginnings : Matthew Adams

The Leighton Battery Heritage Site : www.artillerywa.org.au/raahs/leighton

The Leighton Battery Virtual Tour : www.artillerywa.org.au/vtour/vtour

Engineering Heritage WA : Nomination of Fremantle Fortress – Rottnest Island WW2 Coastal Defence Facilities for an Engineering Heritage National Landmark 2010

The Royal Australian Artillery Association WA (Inc) : Brochure of Project 2013 Celebrating 75 Year of Artillery History in Western Australia

Authors

Nomination prepared for Engineering Heritage Western Australia by Don Young and Mark Bush, May 2014.

14. ADDITIONAL PHOTOGRAPHS



Figure 13. Aerial Photograph of the three 5.25 inch Coastal/AA gun sites



Figure 14. 3.7 inch Heavy Anti aircraft gun (present day)



Figure 15. First Aid Room

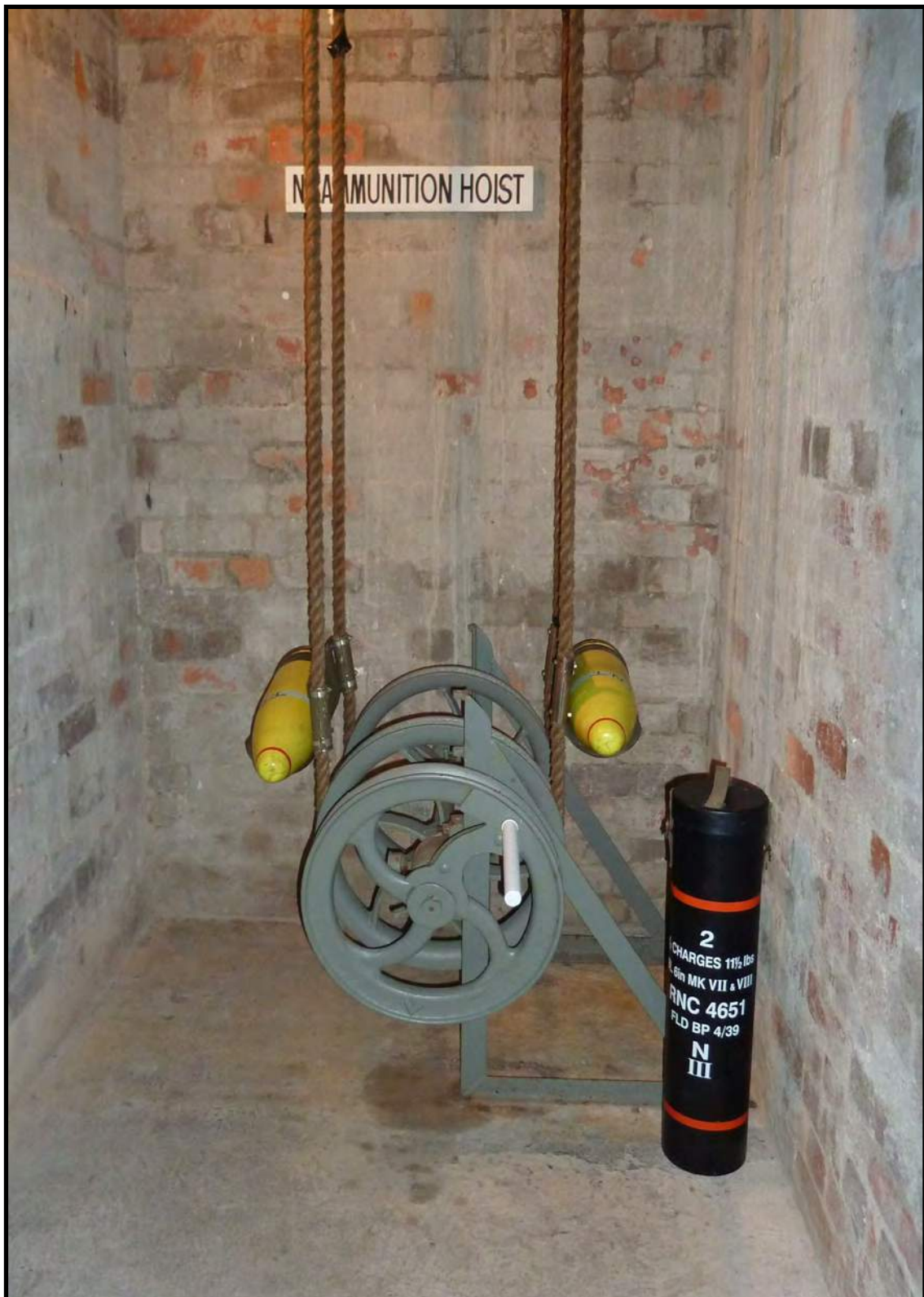


Figure 16. Ammunition Hoist



Figure 17. Museum display of ammunition and propellants



Figure 18. Artillery Store



Figure 19. Museum display of ammunition, highlighting air defence of Fremantle



Figure 20. Panorama of Fremantle Fortress WW2 Coastal Defence Facilities in existing museum



Figure 21. Historical photographs of notable wartime ships that visited Fremantle



Figure 22. 5.25 inch Coastal / AA Lower Gun Floor showing mount



Figure 23. 5.25 inch Gun Command Post